



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,580	08/02/2001	Norishisa Okada	648.40365X00	6329

20457 7590 06/23/2003
STERLING W. CHANDLER
1300 NORTH 17TH ST., SUITE1800
ARLINGTON, VA 22209-9889

EXAMINER

MUSSER, BARBARA J

ART UNIT	PAPER NUMBER
----------	--------------

1733

DATE MAILED: 06/23/2003

C

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/890,580

Applicant(s)

OKADA ET AL.

Examiner

Barbara J. Musser

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 15-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, it is unclear how the core and second plate can be bent and then the core is adhered to the second plate. It is suggested that in line 12, "second" be replaced by --first--.

Regarding claim 2, it is unclear where the adhesive is applied as the claim states the adhesive is sprayed between the core and first plate while claim 1 states the adhesive is applied to either the core or first plate. It is suggested this claim be amended to indicate the adhesive is sprayed on either the core or the first plate.

Claim 4 recites the limitation "the means for spraying said adhesive" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 4 recites the limitation "the width direction" in line 4. There is insufficient antecedent basis for this limitation in the claim. Applicant has not defined which direction is the width direction.

Regarding claims 5 and 7, it is unclear which other end is sucked to the base as the first plate, second plate, and core all have an other end. It is unclear what is meant by moving said base on said other end. It is unclear if this means the base is on top of the other end or moves with the other end.

Claim 11 recites the limitation "said core material" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 11, it is unclear when the second plate is bonded to the core as lines 8-9 indicate the core is adhered to the second plate, but lines 12-13 indicate the core is adhered to the second plate. It is suggested "second" be changed to –first—in line 13.

Claim 12 recites the limitation "the core material" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 12, it is unclear when the second plate is bonded to the core as lines 5-6 indicate the core is adhered to the second plate, but lines 9-10 indicate the core is adhered to the second plate. It is suggested "second" be changed to –first—in line 10.

Claim 13 recites the limitation "the core material" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "the core material" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "the cell of said core material" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1733

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palfey et al. in view of Banks et al.(U.S. Patent 6,036,802).

Palfey et al. discloses forming a bent laminate for specialized vehicles by bending a foam core and panel in a direction and then bending the second panel in the same direction so it forms the outer layer and attaching it to the first via adhesive. It also discloses it is known in the art to bend a core and a first panel in a direction and then attach a second panel as the inner layer.(Col. 1, ll. 11-17; Col. 2, ll. 8-12, 53-56; Figures 2-4) One in the art reading the reference as a whole would appreciate that the method of Palfey et al. could be used to form a smooth inner panel by bending the inner panel and then the core and second panel laminate since the prior art discloses that bending the core and laminate and then attaching the inner panel is known in the art. The reference is silent as to the equipment used to bend the laminate. Banks et al. discloses an apparatus for forming a bend in a laminate for airplane interiors by holding one end of the laminate via vacuum while bending the other end.(Col. 1, ll. 45-51; Col. 7, ll. 10-48) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the apparatus of Banks et al. to bend the laminate of Palfey et al. since Palfey et al. is silent as to the equipment required and since Banks et al. is directed to form a bend in the same type of laminate structure particularly since Banks et al. discloses the apparatus can be used for foam core panels as well as honeycomb core.(Col. 3, ll. 65- Col. 4, ll. 2)

Regarding claims 2 and 3, Palfey et al. discloses the adhesive is sprayed on both the panel and the core.(Col. 2, ll. 53-56)

Regarding claim 4, one in the art would appreciate that could be applied in any conventional pattern such as in the width direction. Only the expected results would be achieved.

Regarding claims 5 and 7, Banks et al. does not disclose pulling the first panel into the bend via sucking. However, it does discloses using a vacuum to hold panels in place. One in the art reading the references as a whole would appreciate that vacuum could be used to bend the panel prior to bending the core since Palfey et al. discloses the panel is bent and since Banks et al. discloses it is known to use vacuum to move items.(Col. 7, ll. 10-48)

Regarding claim 8, one in the art would appreciate that since the bend formed in the panel is arc shaped, the apparatus used to form the bend would be arc shaped to ensure the proper curvature.

Regarding claim 9, the references are silent as to bending the core with a roller. However, the use of a roller to press something into a shape is well-known and conventional in the bonding arts and it would have been obvious to one of ordinary skill in the art at the time the invention was made for that reason.

Regarding claim 14, while Banks et al. does not specifically disclose a honeycomb panel with foam in the cells, it does disclose a foam panel and a honeycomb panel and that the apparatus can be used for other types of commonly used panels.(Col. 7, ll. 65- Col. 8, ll. 2) It would have been obvious to one of ordinary skill in

Art Unit: 1733

the art at the time the invention was made to bend a honeycomb panel with foam in the cells since which is a well-known type of panel and since Banks et al. discloses the apparatus can be used for any type of panel.

5. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banks et al. in view of Palfey et al.

Banks et al. discloses an apparatus for forming a bend in a laminate for airplane interiors by holding one end of the laminate via vacuum while bending the other end.(Col. 1, ll. 45-51; Col. 7, ll. 10-48) A portion of the inner panel is heated to disbond the adhesive and pulled from the laminate.(Abstract; Figures 19-21) It does not disclose heating and pulling all of the inner panel from the bend to the edge of the panel. Palfey et al. discloses forming a bent laminate for specialized vehicles by bending a foam core and panel in a direction and then bending the second panel in the same direction so it forms the outer layer and attaching it to the first via adhesive to form an attractive surface. It would have been obvious to one of ordinary skill in the art at the time the invention was made to heat and remove the portion of the inner panel of Banks et al. extending from the bend to the edge and re-applying it after bending since this would form a more attractive appearance as desired by Banks et al.(Col. 1, ll. 21-24)

Regarding claims 2 and 3, Palfey et al. discloses the adhesive is sprayed on both the panel and the core.(Col. 2, ll. 53-56)

Regarding claim 4, one in the art would appreciate that could be applied in any conventional pattern such as in the width direction. Only the expected results would be achieved.

Regarding claims 5 and 7, Banks et al. does not disclose pulling the first panel into the bend via sucking. However, it does disclose using a vacuum to hold panels in place. One in the art reading the references as a whole would appreciate that vacuum could be used to bend the panel prior to bending the core since Palfey et al. discloses the panel is bent and since Banks et al. discloses it is known to use vacuum to move items.(Col. 7, ll. 10-48)

Regarding claim 8, one in the art would appreciate that since the bend formed in the panel is arc shaped, the apparatus used to form the bend would be arc shaped to ensure the proper curvature.

Regarding claim 9, the references are silent as to bending the core with a roller. However, the use of a roller to press something into a shape is well-known and conventional in the bonding arts and it would have been obvious to one of ordinary skill in the art at the time the invention was made for that reason.

Regarding claim 14, while Banks et al. does not specifically disclose a honeycomb panel with foam in the cells, it does disclose a foam panel and a honeycomb panel and that the apparatus can be used for other types of commonly used panels.(Col. 7, ll. 65- Col. 8, ll. 2) It would have been obvious to one of ordinary skill in the art at the time the invention was made to bend a honeycomb panel with foam in the

cells since which is a well-known type of panel and since Banks et al. discloses the apparatus can be used for any type of panel.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Barbara J. Musser** whose telephone number is (703)-305-1352. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

BJM

BJM
June 18, 2003


SAM CHUAN YAO
PRIMARY EXAMINER